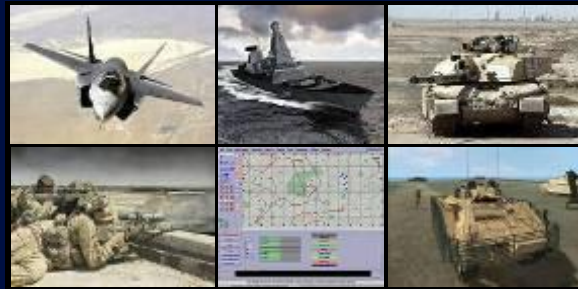# 24 February 2010
NATO Modelling & Simulation Group MSG-079
2010 Coalition Battle Management Language (C-BML) Workshop

UK Introduction

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Ministry of Defence

	Form Approved
# Report Documentation Page	OMB No. 0704-0188

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1. REPORT DATE **FEB 2010**	2. REPORT TYPE **N/A**	3. DATES COVERED **-**

4. TITLE AND SUBTITLE		5a. CONTRACT NUMBER
NATO Modelling & Simulation Group MSG-079 2010 Coalition Battle Management Language (C-BML) Workshop UK Introduction		5b. GRANT NUMBER
		5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER
		5e. TASK NUMBER
		5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Joint Training Evaluation & Simulation Ministry of Defence UK**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
See also ADA564685. 2010 Coalition Battle Management Language Workshop (Atelier 2010 sur le langage de gestion du champ de bataille pour les operations en coalition). RTO-MP-MSG-079

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**SAR**	**14**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Cap JTES

- Joint Training Evaluation & Simulation

- Training Systems & Readiness CMG
  - Joint Training & Common Simulation Infrastructure CPG
  - Test & Evaluation CPG

- Cap Sponsor for:
  - Joint Collective NEC Training Capability
  - Joint Training Simulation Services
  - NITEworks
  - JMNIAN & ARTD
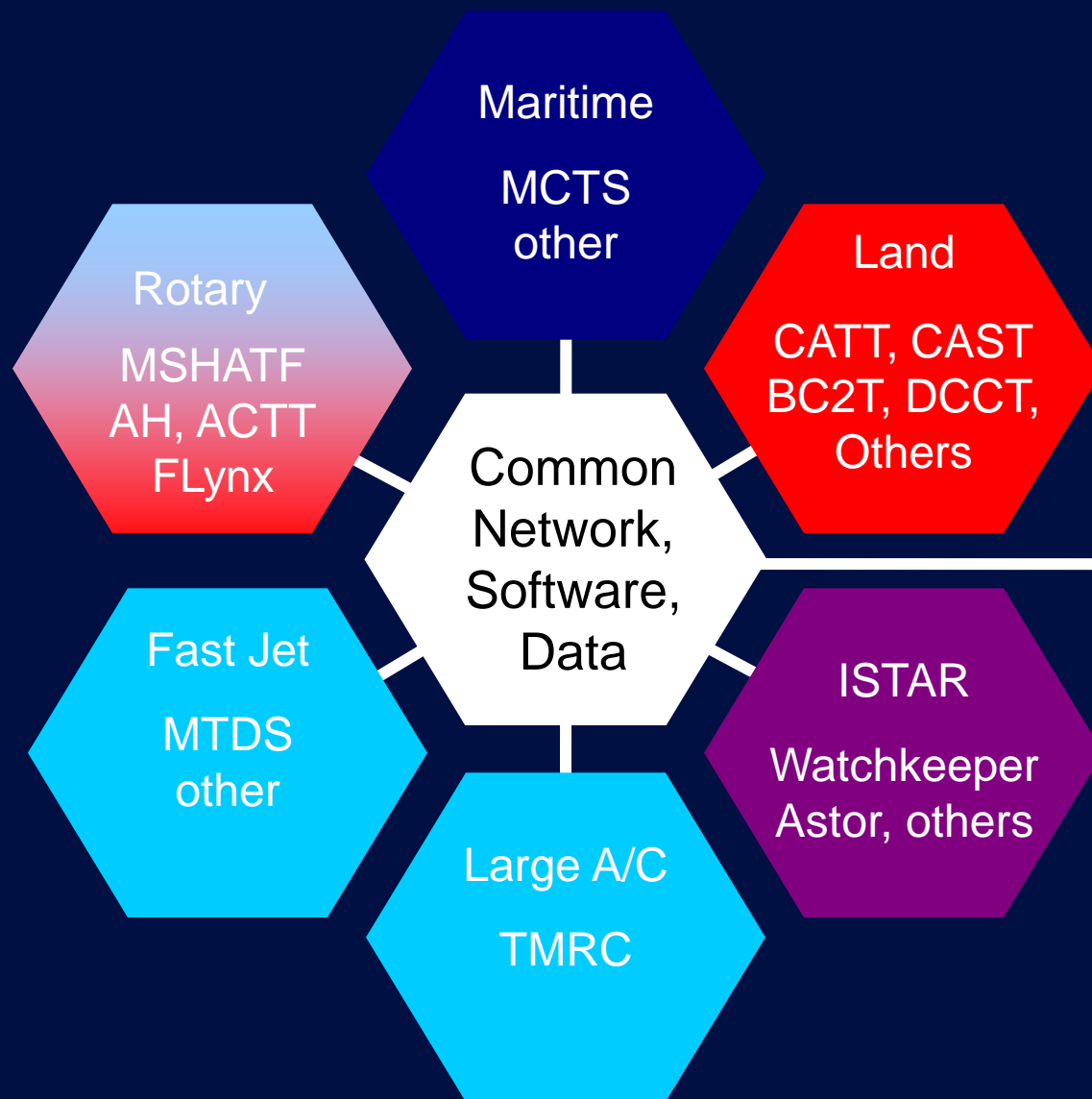 - Long Term Partnering Agreement (QinetiQ T&E)

Our Goals

- All users are able to train, exercise and prepare for operations in a Joint and Coalition context.

- MoD has a common simulation infrastructure that improves overall cost effectiveness and flexibility for all MoD simulation capabilities.
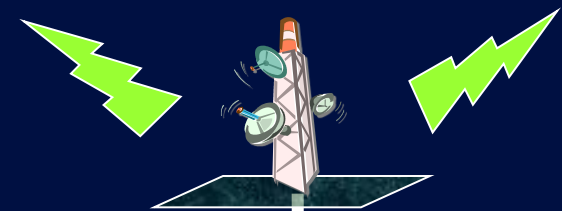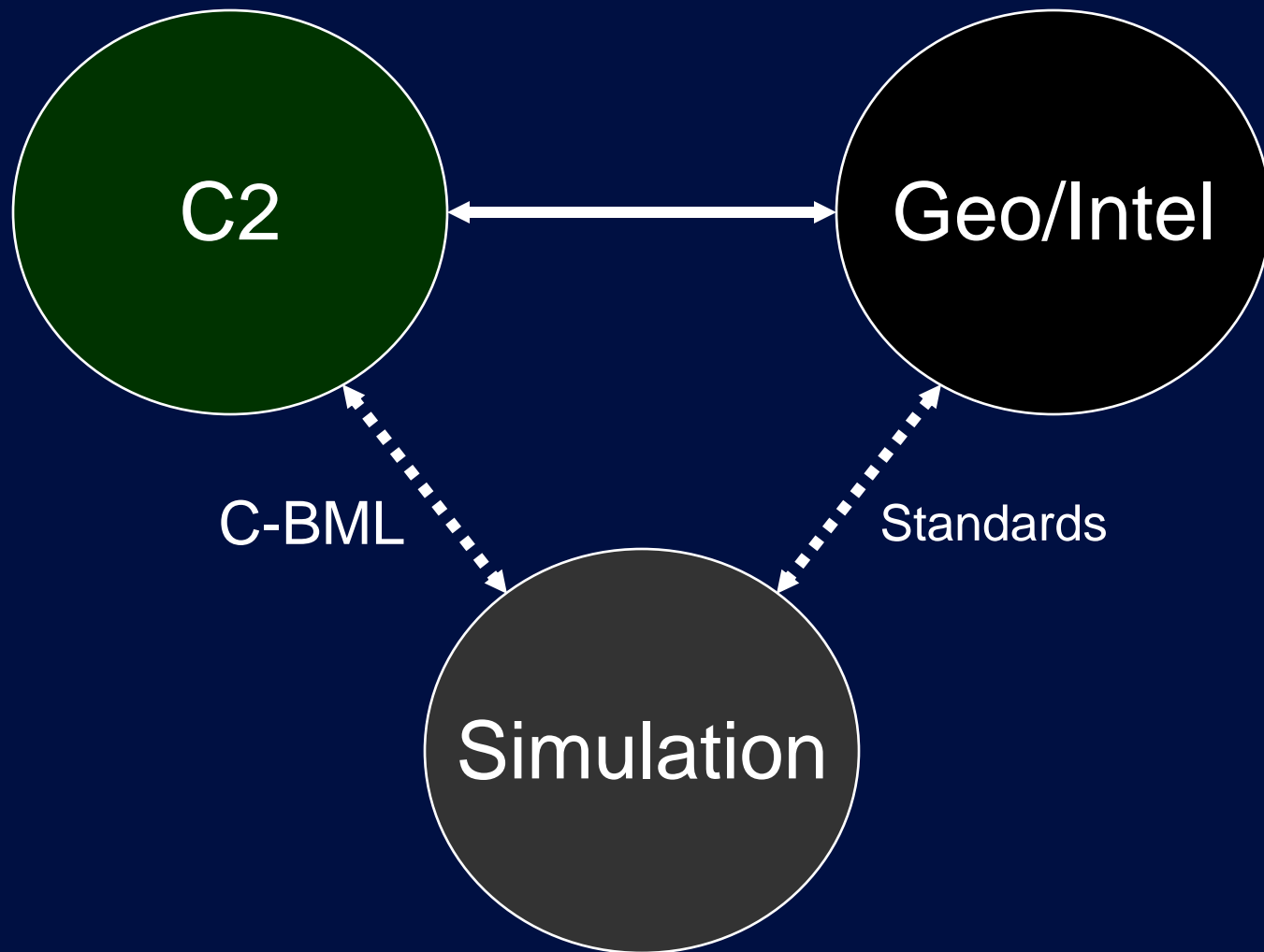
Current UK Training Systems…..
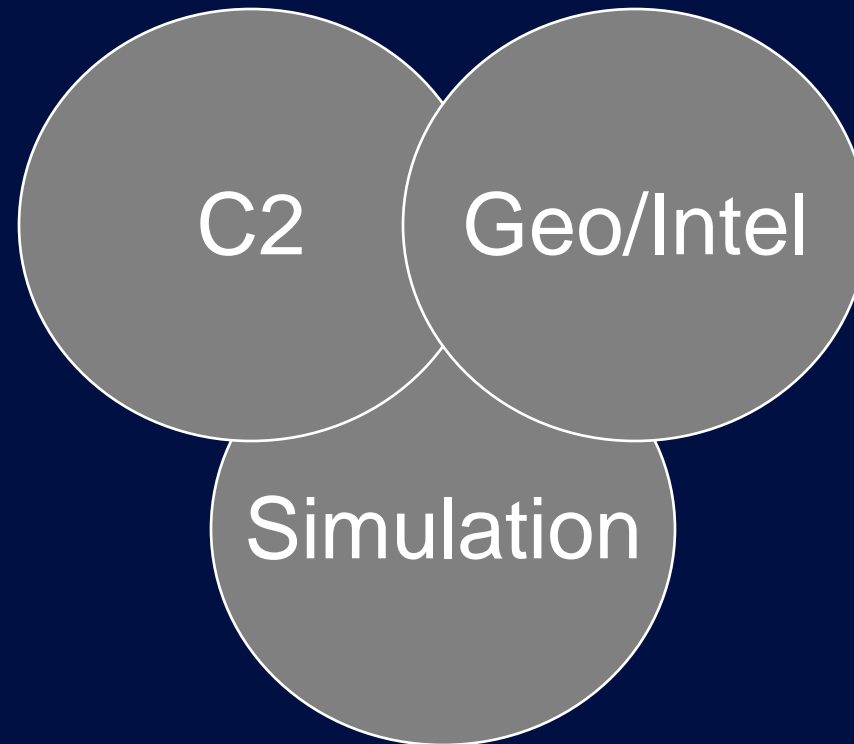
Joint Training Simulation Services (JTS2)

Maritime

MCTS
other

Rotary

MSHATF
AH, ACTT
FLynx

Land

CATT, CAST
BC2T, DCCT,
Others

Common
Network,
Software,
Data

Fast Jet

MTDS
other

ISTAR

Watchkeeper
Astor, others

Large A/C
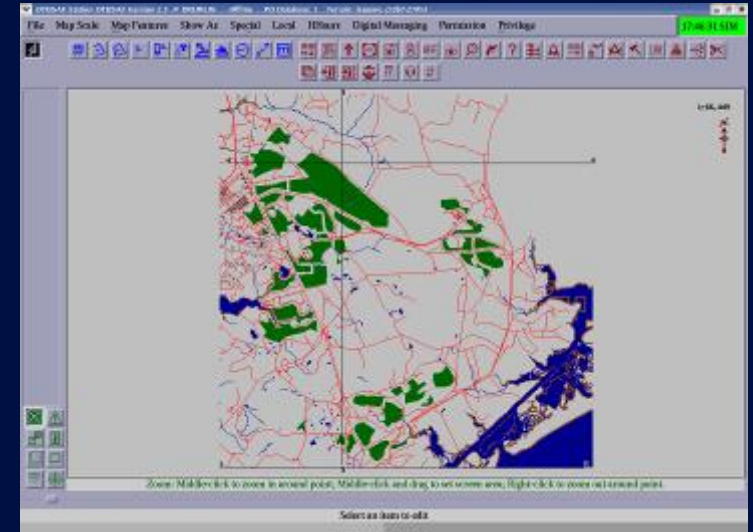
TMRC

Live
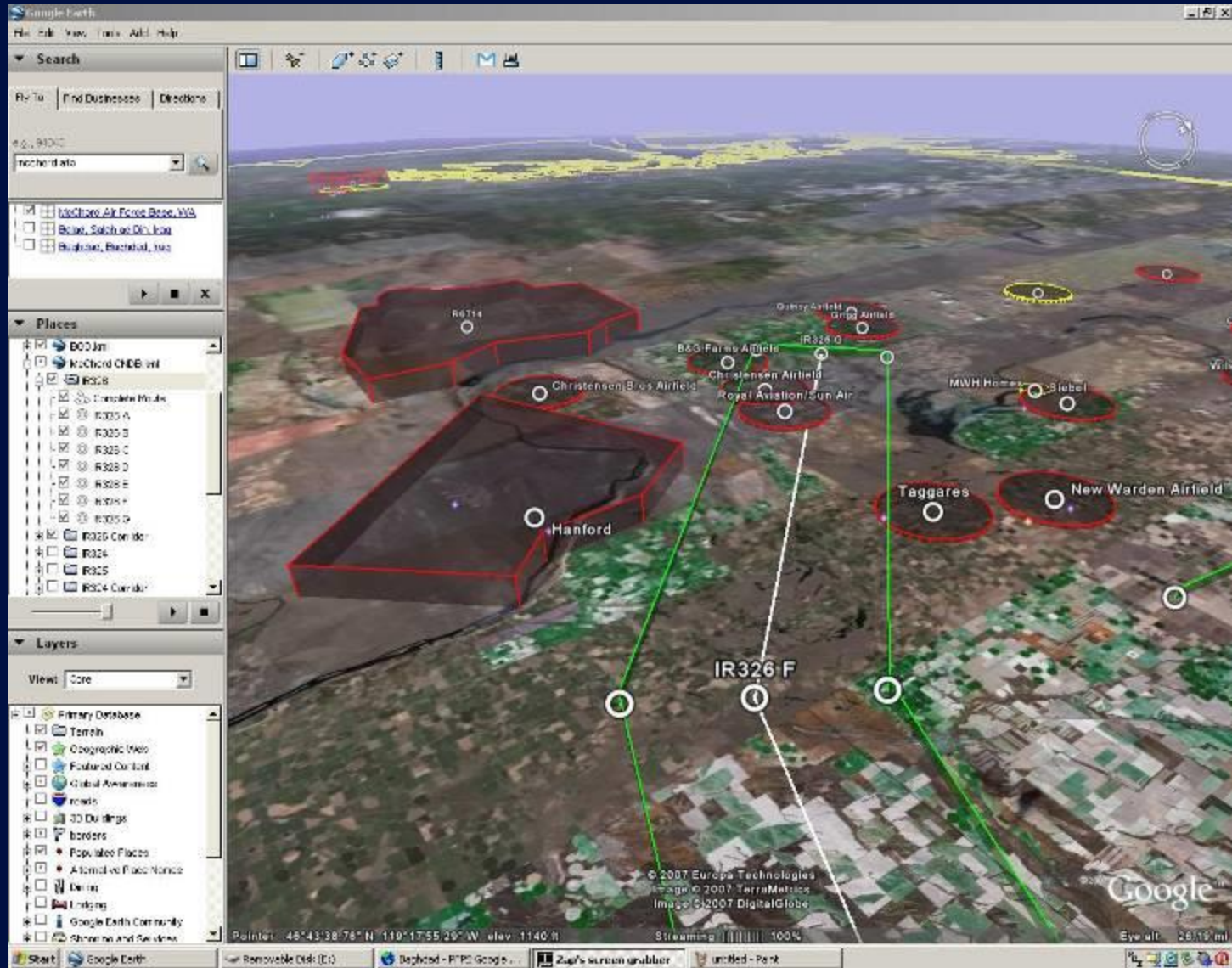
Linkages

Future

Different?

C2

SAF

Game

Future?

CDS − Nov 08

- … I might suggest that one possible development is the blurring or perhaps the increased blurring of the boundary between what we think of as simulation and reality.

- After all the crew of a submarine when it is submerged at least is in many ways already operating in a virtual environment. And if you combine this with the trend to uninhabited vehicles then I think some intriguing possibilities present themselves. Lets imagine for a moment a possible future scenario. A commander sits above a battle space with a Gods eye view. He is not actually there he is in a synthetic environment fused from the inputs of multiple and diverse sensors.

- By a gesture or a word he can suddenly expand any part of the scene. Again by word or gesture he can designate targets which are automatically engaged perhaps by unmanned combat vehicles which are cycling through the area perhaps by ground based fires or perhaps by stand off launch weapons. He sees the results in real time and reacts accordingly. The outcome is presented also in real time to another commander who is mounting a synchronised service attack. Software automatically adjusts objective to achieve the optimum outcome in the changing circumstances.

- Science fiction no, merely an extrapolation on a grand scale yes, of capabilities we can see emerging now. Which is not to say that such a scenario is within easy or quick reach. But if we want to shape the future successfully we need to have some idea of the kinds of places to which it leads us. And the scenario that I have described has at its heart the networking of sensors, decision makers and weapons systems, the networking of decisions with other command elements and processes the networking of weapon systems to provide the right effects and it fuses synthetic and real world environments in a way that makes it increasingly difficult to distinguish between the two. And one of the by products of that would be it would it make increasingly difficult to distinguish between training carried out in simulation and the real thing.

Different?